UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,025	02/04/2004	Brad A. Armstrong	F2811	6101

88228 7590 03/16/2010

Fogarty, LLC
P.O. Box 703695
Dallas, TX 75370-3695

EXAMINER	
BODDIE, WILLIAM	
ART UNIT	**PAPER NUMBER**
2629	
MAIL DATE	**DELIVERY MODE**
03/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/773,025	ARMSTRONG, BRAD A.	
	Examiner	Art Unit	
	WILLIAM L. BODDIE	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/20/09 x2*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In an amendment dated, November 19th, 2009 the Applicant amended claims 9 and 12. Currently claims 9-15 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 9-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 9, 11-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Autry et al. (US 5,724,106) in view of Hall et al. (US 5,703,623).

With respect to claim 9, Autry discloses, an image controller (124 in fig. 1) allowing control of an image generation device (118 -122 in fig. 1) capable of creating at least two-dimensional imagery (fig. 14a), the image controller comprising:

a single input member capable of being manipulated in six degrees of freedom by a human hand (the controller is wireless and seems clearly capable of being manipulated in six DOF);

a circuit board (plane in fig. 9b) having an upper surface (surface containing the trackball 910 in fig. 9b) and a lower surface (bottom of plane fig. 9b, which responds to trigger 913)

a secondary input member (910 in fig. 9b) capable of being controlled by the human hand to effect bidirectional movement of the two-dimensional imagery on at least one axis (col. 11, lines 25-29);

two additional sensors (X and Y axis sensors) located on the upper surface of the circuit board, the two additional sensors indicate the bidirectional movement of the secondary input member (col. 11, lines 25-29);

one additional sensor located on the lower surface of the circuit board (sensor associated with trigger 913 in fig. 9b);

two button sensors located on the upper surface of the circuit board control at least a volume function (918 in fig. 9a; col. 12, lines 5-7);

one button sensor located on the upper surface of the circuit board (914 in fig. 9a) controls an ON/OFF function (col. 12, lines 1-2);

a transmitter allowing wireless communication of information from the controller to the image generation device, the information is useful to control the image generation device (932 in fig. 9a; col. 12, lines 24-31); and

a battery compartment adapted to hold a battery for powering the image controller (936 in fig. 9b; col. 12, lines 31-33).

Autry does not expressly disclose three-dimensional imagery creation nor a single input member capable of being manipulated in six degrees of freedom by a human hand to control movement of the three-dimensional imagery in six degrees of freedom.

Hall discloses, an image controller (13 in fig. 1) allowing control of an image generation device (12 in fig. 1) capable of creating three-dimensional imagery (col. 1, lines 34-46), the image controller comprising:

a single input member (1 in fig. 2) capable of being manipulated in six degrees of freedom by a human hand (device is clearly capable of being manipulated in six degrees of freedom by a human hand) to control movement of the three-dimensional imagery in six degrees of freedom (col. 6, lines 42-51);

a circuit board having an upper surface and a lower surface (1' in fig. 2);

a first proportional sensor (9 in figs. 2-3a) located on the upper surface of the circuit board (1' in figs. 2-3a), the first proportional sensor indicates manipulation of the single input member (col. 7, lines 11-14)

a second proportional sensor (5 in figs. 2-3a) indicating rotation of the single input member (col. 7, lines 3-9).

Hall and Autry are analogous art because they are both from the same field of endeavor namely television remote controllers.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the three-dimensional imagery and three-dimensional movement sensors taught by Hall in the device of Autry.

The motivation for doing so would have been low manufacturing cost and to meet future 3D multimedia applications (Hall; col. 1, lines 34-43).

With respect to claims 11 and 14, Autry and Hall disclose the image controller of claims 9 and 12 (see above).

Autry further discloses two button sensors located on the upper surface of the circuit board control channel switching (916 in fig. 9a; col. 12, lines 3-4).

With respect to claim 12, Autry discloses, an image controller (124 in fig. 1) allowing control of an image generation device (118 -122 in fig. 1) capable of creating at least two-dimensional imagery (fig. 14a), the image controller comprising:

a single input member capable of being manipulated in six degrees of freedom by a human hand (the controller is wireless and seems clearly capable of being manipulated in six DOF);

a circuit board (plane in fig. 9b);

a secondary input member (910 in fig. 9b) capable of being controlled by the human hand to effect bidirectional movement of the two-dimensional imagery on at least one axis (col. 11, lines 25-29);

two additional sensors (X and Y axis sensors) located on the circuit board, the two additional sensors indicate the bidirectional movement of the secondary input member (col. 11, lines 25-29);

two button sensors located on the circuit board control at least a volume function (918 in fig. 9a; col. 12, lines 5-7);

one button sensor located on the circuit board (914 in fig. 9a) controls an ON/OFF function (col. 12, lines 1-2);

a transmitter allowing wireless communication of information from the controller to the image generation device, the information is useful to control the image generation device (932 in fig. 9a; col. 12, lines 24-31); and

a battery compartment adapted to hold a battery for powering the image controller (936 in fig. 9b; col. 12, lines 31-33).

Autry does not expressly disclose three-dimensional imagery creation nor a single input member capable of being manipulated in six degrees of freedom by a human hand to control movement of the three-dimensional imagery in six degrees of freedom.

Hall discloses, an image controller (13 in fig. 1) allowing control of an image generation device (12 in fig. 1) capable of creating three-dimensional imagery (col. 1, lines 34-46), the image controller comprising:

a single input member (1 in fig. 2) capable of being manipulated in six degrees of freedom by a human hand (device is clearly capable of being manipulated in six degrees of freedom by a human hand) to control movement of the three-dimensional imagery in six degrees of freedom (col. 6, lines 42-51);

a circuit board (1' in fig. 2);

a first proportional sensor (9 in figs. 2-3a) located on the circuit board (1' in figs. 2-3a), the first proportional sensor indicates manipulation of the single input member (col. 7, lines 11-14).

Hall and Autry are analogous art because they are both from the same field of endeavor namely television remote controllers.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the three-dimensional imagery and three-dimensional movement sensors taught by Hall in the device of Autry.

The motivation for doing so would have been low manufacturing cost and to meet future 3D multimedia applications (Hall; col. 1, lines 34-43).

5. Claims 10, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Autry et al. (US 5,724,106) in view of Hall et al. (US 5,703,623) and further in view of Schuster et al. (5,623,099).

With respect to claims 10 and 13, Hall and Autry disclose the image controller of claims 9 and 12 (see above).

Hall discloses that the proportional sensor is a piezoelectric sensor (col. 9, lines 19-20).

Neither Hall nor Autry disclose that the proportional sensor is a capacitive type.

Schuster discloses, proportional sensors which are of a capacitive type (col. 1, lines 42-50)

Schuster, Hall and Autry are analogous art because they are all from the same field of endeavor namely directional sensors.

At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the piezoelectric sensors of Hall with the capacitive accelerometers of Schuster.

The motivation for doing so would have been to overcome the very high input impedance necessary for piezoelectric sensors and provide a sensor more resistive to electrostatic interference (Schuster; col. 1, lines 29-50).

With respect to claim 15, Autry, Schuster and Hall disclose the image controller of claim 13 (see above).

Neither Schuster nor Autry expressly disclose a second proportional sensor indicating rotation of the single input member (5 in figs. 2-3a; col. 7, lines 1-9).

Hall further discloses a second proportional sensor indicating rotation of the single input member (5 in figs. 2-3a; col. 7, lines 1-9).

Schuster, Hall and Autry are analogous art because they are all from the same field of endeavor namely directional sensors.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the three-dimensional imagery and three-dimensional movement sensors taught by Hall in the device of Autry.

The motivation for doing so would have been low manufacturing cost and to meet future 3D multimedia applications (Hall; col. 1, lines 34-43).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM L. BODDIE whose telephone number is (571)272-0666. The examiner can normally be reached on Monday through Friday, 7:30 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William L Boddie/
Examiner, Art Unit 2629
3/16/2010

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629